

(No Model.)

S. H. PERCY.
GEAR CASE.

No. 501,626.

Patented July 18, 1893.

Fig. 1.

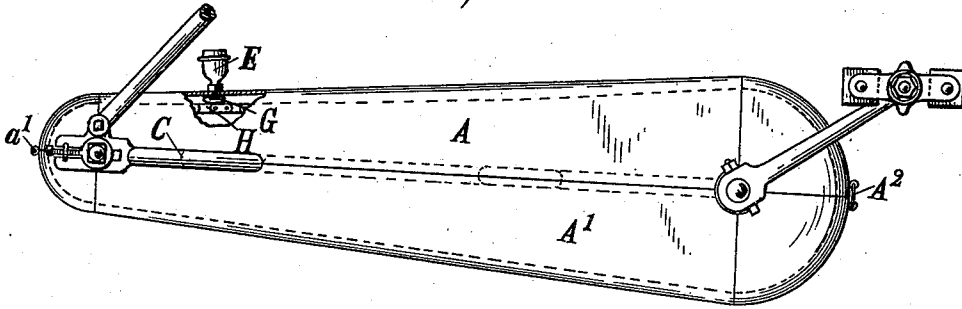


Fig. 2.

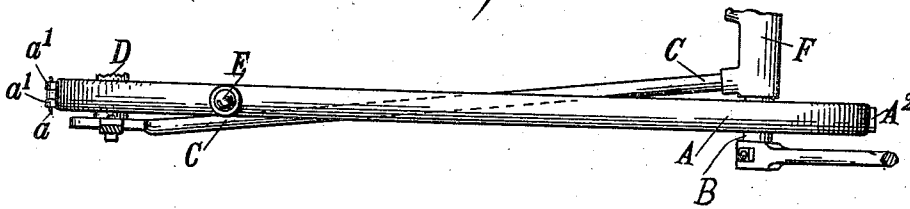


Fig. 3.

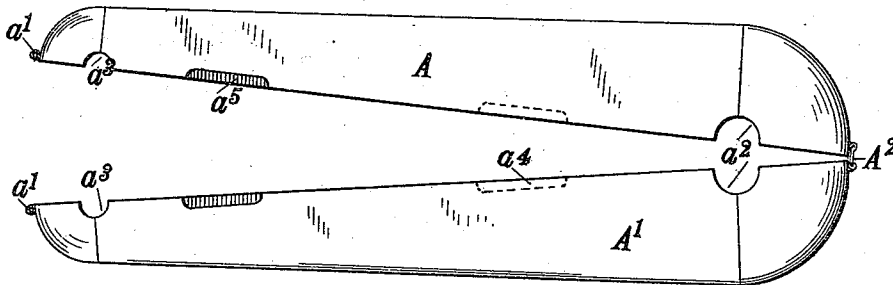
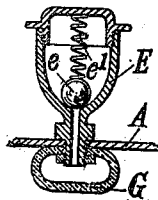


Fig. 4.



Witnesses.

Frank Miller
B. V. Woolley.

Inventor.

Sidney H. Percy
By King & Shriverton
his attorneys

UNITED STATES PATENT OFFICE.

SIDNEY

PERCY, OF CHICAGO, ILLINOIS.

GEAR-CASE.

SPECIFICATION forming

part of Letters Patent No. 501,626, dated July 18, 1893.

Application

February 20, 1893. Serial No. 463,041. (No model.)

To all whom it may concern

Be it known that I, SIDNEY PERCY, a subject of the Queen of Great Britain, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Gear-Case, and I do hereby declare the following to be an exact description of the invention, enable others skilled in the art to make and use the same.

My invention relates to the use of devices for protecting the driving mechanism of a safety bicycle from dust and dirt, and it consists in the combination of parts and the arrangement of parts shown in the drawings, and described and pointed out distinctly in the claims.

In the drawings, Figure 1 is a side elevation of my improved gear case and a part of the bicycle with which it is used. Fig. 2 is a plan view of the same part disassembled from the bicycle; and Fig. 3 is a central vertical sectional view of the gear case open, while the same is inclosed by the case.

The case is preferably made of sheet metal, and it is of such shape that it embraces the two sprocket wheels and the driving chain of the bicycle. The case is formed of two substantially equal sections, viz., the upper section A, and the lower section A', which are hinged together at one end, preferably by means of the hinges, as for example the eyes a' a'' and the lugs a^3 a^4 , provided for connecting or disconnecting at will the two sections. Near one end of both sections, semi-circular notches a^1 a^2 are formed in the meeting edges. When the sections are closed together; the crank shaft B passes through the opening thus formed in the sides of the case. Near the other end of both sections similar notches a^3 are made, which form the opening through which the driving wheel hub enters one side of the case, and the spindle D passes out of the other side. One of

the rear fork members C, is connected at its rear end with the outer end of the spindle D, and at its forward end with the crank bracket F. It therefore passes diagonally through the case, and the meeting edges of the case sections are notched at a^4 and a^5 to permit it to so pass. The notches a^4 a^5 are of such depth that when the case is closed, it fits closely against the fork member C. The case thus rests upon, and is supported by, the fork member in the proper relation to the driving mechanism.

It is very desirable to have some means by which the chain may be oiled without removing the case. I therefore secure to the upper edge of the section A an oil cup E, which is adapted to discharge into the case. Supported in the case just below the discharge orifice of the oil cup, is a piece of wicking G, which rests upon the upper side of the chain H. The oil drops from the oil cup onto the wicking, from which it is delivered to the chain. The cup is provided with an automatically operating valve, whereby a limited quantity of oil is delivered to the wicking when the bicycle is in use. In the cup is a ball e , which is adapted to close the discharge orifice. A light coil spring e' is secured to the cover of the cup, and when the cover is in place, the lower end of the spring engages with the ball and presses it to its seat. But when the bicycle is being ridden, the vibration will jar the ball slightly from its seat, and thus sufficient oil will be permitted to escape for the intended purpose.

Having described my invention, I claim—

1. In a bicycle, the combination of a gear-case adapted to inclose the two sprocket wheels and the driving chain, with one of the rear fork members which passes diagonally through said case, and suitable means for clamping said fork member on both sides of the case, whereby the latter is supported, substantially as specified.

2. In a bicycle, a gear case adapted to inclose the two sprocket wheels and driving chain, composed of two substantially equal longitudinal sections which are hinged together at one end, the meeting edges of said

the rear fork members C, is connected at its rear end with the outer end of the spindle D, and at its forward end with the crank bracket F. It therefore passes diagonally through the case, and the meeting edges of the case sections are notched at a^4 and a^5 to permit it to so pass. The notches a^4 a^5 are of such depth that when the case is closed, it fits closely against the fork member C. The case thus rests upon, and is supported by, the fork member in the proper relation to the driving mechanism.

It is very desirable to have some means by which the chain may be oiled without removing the case. I therefore secure to the upper edge of the section A an oil cup E, which is adapted to discharge into the case. Supported in the case just below the discharge orifice of the oil cup, is a piece of wicking G, which rests upon the upper side of the chain H. The oil drops from the oil cup onto the wicking, from which it is delivered to the chain. The cup is provided with an automatically operating valve, whereby a limited quantity of oil is delivered to the wicking when the bicycle is in use. In the cup is a ball e , which is adapted to close the discharge orifice. A light coil spring e' is secured to the cover of the cup, and when the cover is in place, the lower end of the spring engages with the ball and presses it to its seat. But when the bicycle is being ridden, the vibration will jar the ball slightly from its seat, and thus sufficient oil will be permitted to escape for the intended purpose.

Having described my invention, I claim—

1. In a bicycle, the combination of a gear-case adapted to inclose the two sprocket wheels and the driving chain, with one of the rear fork members which passes diagonally through said case, and suitable means for clamping said fork member on both sides of the case, whereby the latter is supported, substantially as specified.

2. In a bicycle, a gear case adapted to inclose the two sprocket wheels and driving chain, composed of two substantially equal longitudinal sections which are hinged together at one end, the meeting edges of said

sections being notched substantially as described, to permit the crank shaft and the rear wheel hub and spindle, and one of the rear fork members to pass through the case
5 when the same is closed, combined with said rear fork member, which passes diagonally through the case and upon which the case rests, and means for securing together the

free ends of the case sections, substantially as set forth. 10

In testimony whereof I affix my signature in presence of two witnesses.

SIDNEY H. PERCY.

Witnesses:

JAMES BAILEY,
P. E. GREGORY.